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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/603,062	06/26/2000	Beong-Jo Kim	678-505 (P9425/IMT)	3341

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03/16/2004

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EXAMINER

TRAN, THIEN D

ART UNIT	PAPER NUMBER
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2665

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DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/603,062

Applicant(s)

KIM ET AL.

Examiner

Thien D Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.7.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being participated by Park et al (U.S Patent No. 6,397,367).

Regarding claims 1, 7, 8, 13, 14, 15, Park et al discloses a channel coding and multiplexing apparatus in a CDMA communication system, in which data frames that may have different data rate (transmission time intervals) are received in parallel via a plurality of transport channels and multiplexed to form a serial data frame (col.5.line 55-col.6 line 30, figure 15), the apparatus comprising:

a number of radio frame matchers, the number of radio frame matchers being at least equal to the number of transport channels, each radio frame matcher having a radio frame segmenter for receiving a data frame, to segment the data frames into radio frames (figure 15); and

a multiplexer 1505 for multiplexing the radio frames to form the serial data frame.

See col.14 lines 20-45.

Regarding claim 2, Park et al discloses that each radio frame segmenter determines the bit number of a radio frame according to the size of an input transport channel frame and the TTI of a radio frame and divides the data frame by the bit number of the radio frame. See col.9 lines 10-35.

Regarding claims 3, 10, Park et al discloses that each radio frame matcher further includes an interleaver for interleaving an input transport channel frame and applying the interleaved frame to a corresponding radio frame segmenter. See col.11 lines 50-60.

Regarding claims 4, 11, Park et al discloses that each radio frame matcher further includes a rate matcher for adjusting the data rate of a radio frame received from a radio frame segmenter by puncturing and repeating the radio frame to match the data rate of the radio frame to that of a physical channel frame. See col.11 lines 30-45.

Regarding claim 5, Park et al discloses that the radio frame matchers are connected between channel coders and the multiplexer in an uplink channel-transmitting device, and each of the radio frame matchers of the uplink channel transmitting device comprises:

- an interleaver for interleaving an input transport channel frame (col.14 lines 25-30);

- a radio frame segmenter for determining the bit number of a radio frame according to the size of the input transport channel frame and a radio frame and dividing the data frame by a variable, said variable being a function of the radio frame; and

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a rate matcher for adjusting the data rate of a radio frame received from the radio frame segmenter by puncturing and repeating parts of the radio frame to match the data rate of the radio frame to that of a physical channel frame. See col.14 lines 15-55.

Regarding claims 6, 12, Park et al discloses that the radio frame matchers are connected between channel coders and a multiplexer in a downlink channel transmitting device, and each of the radio frame matchers of the downlink channel transmitting device comprises:

- an interleaver for interleaving an input transport channel frame;

- a radio frame segmenter for determining the bit number of a radio frame according, to the size of the input transport channel frame and a radio frame TTI and dividing the data frame by a variable, said variable being a function of the radio frame. See col.14 lines 10-40.

Regarding claims 9, 16, Park et al discloses channel coding and multiplexing method in a CDMA communication system, in which data frames that have one or more transmission time intervals are received in parallel via a plurality of transport channels and converted to data frames of multi-code physical channels, the method comprising the steps of:

- receiving data frames;

- determining a number of insertion bits (filler bits);

- inserting the filler bits into the data frames;

- segmenting the data frames including the filler bits into radio frames in a number of radio frame matchers, the number of radio frame matchers being at least equal

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to the number of transport channels;

 multiplexing the radio frames to form a serial data frame;

 segmenting the serial data frame by the number of the physical channels; and

 assigning the segmented physical channel frames to the corresponding physical channels. See col.12 lines 55-col.13 lines 45, figure 15.

Regarding claims 17, 18, Park et al discloses the coding system for transmitting frame data as similar to the above claims. Therefore, it would have been obvious to have the decoding system for the channel-receiving device for desegmenting a received serial data frame to a plurality of transport channel frames in a CDMA communication system comprising:

 a physical channel desegmenter for desegmenting data frames received via multi-code physical channels to a serial data frame;

 a demultiplexer for demultiplexing the serial data frame to radio frames of a plurality of transport channels; and

 a plurality of radio frame dematchers, the number of radio frame dematchers being at least equal to the number of transport channels, each radio frame dematcher having, a radio frame desegmenter for receiving the corresponding radio frames and for desegmenting the radio frames to data frames of the transport. See col.15 lines 1-30, figure 16.

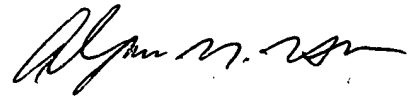
Conclusion

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3. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (703) 308-4388. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Thien Tran



**ALPUS H. HSU
PRIMARY EXAMINER**